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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,929	09/25/2006	Leobardo Montiel-Ortiz	MONTIEL-ORTIZ1	4079

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EXAMINER	
REDDY, KARUNA P	
ART UNIT	**PAPER NUMBER**
1713	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,929	MONTIEL-ORTIZ ET AL.	
	Examiner	Art Unit	
	Karuna P. Reddy	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) 1-4,7,9,11-12,14,16 and 18 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 12/15/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims filed on December 15, 2005 are made of record. Claims 1-18 are pending in the application.

Claim Objections

2. Claims 1-4, 7, 9, 12, 14, 16 and 18 are objected to because of the following informalities: Claim 1 recites "... at least **a** .... at least **an** .... at least **an**..." and should read "... at least **one** .... at least **one** .... at least **one**...". Appropriate correction is required. Claims 2-4 recite "... **further** comprising ..." and should read ".... Comprising....". Claims 7 and 9 are written in an improper Markush format i.e. ".... **further** selected ..... ethyl **or** butyl...." and should read "....selected ..... ethyl **and** butyl....". Claim 12 recites "..... **further** having...." And should read "...having.....". Claims 14 and 16 are written in an improper Markush format i.e. ".... **further** selected ...." and should read ".... selected....". Claim 18 recites "... such as ...." and makes it definite.

3. Claim 11 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only--, and/or, --cannot depend from any other multiple dependent claim-. See MPEP § 608.01(n). Accordingly, the claim 11 has not been further treated on the merits.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 3-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Biletch et al (US 4, 772, 667).

Biletch et al disclose a thermoplastic polymer comprising a styrenic monomer, an acrylate, a methacrylate and a block copolymer (abstract). The feed mixture comprises monomer (a) from about 25 to about 75 parts by weight of a styrenic monomer selected from the group consisting of styrene, p-methyl styrene, t-butyl styrene, dimethyl styrene and the brominated or chlorinated derivatives; monomer (b) being from about 7 to about 30 parts by weight of butyl acrylate; monomer (c) being from about 10 to about 50 parts by weight of methyl methacrylate (column 1, lines 57-65). The block polymer is selected from the group consisting of diblock and triblock copolymers of styrene-butadiene, styrene-butadiene-styrene, styrene-isoprene, styrene-isoprene-styrene, partially hydrogenated styrene-butadiene-styrene and partially hydrogenated styrene-isoprene-styrene having a molecular weight of not less than 75,000 (column 2, lines 32-39).

Therefore, Biletch et al anticipate the instant invention.

6. Claims 1 and 3-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Biletch et al (US 4, 680, 337).

Biletch et al disclose a thermoplastic polymer comprising a styrenic monomer, an acrylate, a methacrylate and a block copolymer (abstract). The feed mixture comprises monomer (a) from about 25 to about 75 parts by weight of a styrenic monomer selected from the group consisting of styrene, p-methyl styrene, t-butyl styrene, dimethyl styrene and the brominated or chlorinated derivatives; monomer (b) being from about 7 to about 30 parts by weight of butyl acrylate; monomer (c) being from about 10 to about 50 parts by weight of methyl methacrylate (column 1, lines 54-63). The block polymer is selected from the group consisting of diblock and triblock copolymers of styrene-butadiene, styrene-butadiene-styrene, styrene-isoprene, styrene-isoprene-styrene, partially hydrogenated styrene-butadiene-styrene and partially hydrogenated styrene-isoprene-styrene having a molecular weight of not less than 75,000 (column 2, lines 29-36).

Therefore, Biletch et al anticipate the instant invention.

7. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita et al (US 6, 310, 148 B1).

Morita et al disclose a styrene resin composition having a copolymer (A) of a styrene monomer and an acrylic monomer as a matrix phase (column 2, lines

6-8). The copolymer (A) of styrene monomer and acrylic monomer that forms a matrix phase is a copolymer of a styrene monomer and a (meth)acrylic acid alkyl ester in a proportion on a weight basis of styrene/acrylic monomer is 95/5 to 50/50 (column 2, lines 49-53). The styrene monomer includes for example styrene, methylstyrene, t-butyl styrene, bromostyrene, chlorostyrene (column 3, 13-18). Also, the alkyl (meth)acrylate is an essential component that imparts the rubber modified copolymer resin of the present invention with surface impact strength and rigidity and specially includes methyl (meth)acrylate. In particular, in respect of luster, it is preferred to use methyl (meth)acrylate and n-butyl (meth)acrylate in combination. In this case the amount of n-butyl (meth)acrylate is preferably from 1-8 parts by weight (column 3, lines 20-33). Also, the copolymer which is in the matrix phase is preferably one that has a weight average molecular weight of 140,000 and a ratio of weight average molecular weight (M_w) /number average molecular weight (M_n) is 1.8 to 2.5 (column 10, lines 5-9). See example 5, wherein the amount of styrene, methyl methacrylate and butyl acrylate is 83 parts, 15 parts and 2 parts respectively. See table 1, where in MFR ranges from 2.8 to 6.0.

Therefore, Morita et al anticipate the instant invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biletch et al (US 4, 772, 667) or Biletch et al (US 4, 680, 337) or Morita et al (US 6, 310, 148 B1) independently, in view of Toya et al (US 6, 107, 411).

The discussion with respect to Biletch '667, Biletch '337 and Morita et al in paragraphs 5, 6 and 7 respectively is incorporated herein by reference.

The prior art is silent with respect to ratio of random copolymer and block copolymer; percentage of butadiene in styrene-butadiene block polymer; molecular weight of block polymer.

However, Toya et al teach block copolymer consisting essentially of a vinyl aromatic hydrocarbon and a conjugated diene which is excellent in transparency, stiffness, impact resistance and spontaneous shrinkage resistance, a composition comprising such as block copolymer and heat shrinkable films made from them (column 1, lines 5-10). The vinyl aromatic

hydrocarbon to be used for the production of the block copolymer (I) may be styrene, methylstyrene, t-butyl styrene, 2,4-dimethyl styrene (column 2, lines 58-62). The conjugated diene to be used for the production of block copolymer (I) may be 1,3-butadiene (column 2, lines 64-66). Particularly 1,3-butadiene or isoprene is commonly used. **The weight ratio of vinyl aromatic hydrocarbon to conjugated diene is from 60:40 to 90:10. If the vinyl aromatic hydrocarbon is less than the 60%, the transparency and stiffness tend to be low and if exceeds 90%, the impact resistance tends to be low. The number average molecular weight of the block copolymer is usually from 40,000 to 500,000. If it is less than 40,000 stiffness or impact resistance is not adequate** (column 3, lines 1-14). The polymer (II) to be used is a polymer selected from (i-iv) and (iii) is a copolymer consisting essentially of a vinyl aromatic hydrocarbon polymer and a (meth)acrylate (column 6, lines 5-12). The (meth)acrylate may be methyl acrylate, ethyl acrylate, butyl acrylate and methyl methacrylate (column 7, lines 10-15). Copolymer (iii) can be obtained by polymerizing a monomer mixture comprising a vinyl aromatic hydrocarbon and a (meth)acrylate in a weight ratio of from 5:95 to 99:1 (column 7, lines 16-18). The present invention comprises the block polymer (I) from 50 to 99.8 parts by weight and polymer (II) from 0.2 to 50 parts by weight (column 7, lines 34-40). **The polymer (iii) is used for improvement of stiffness. If it is less than 0.2 parts by weight, no effect of its addition is observed and if it exceeds 50 parts by weight stiffness tends to be high.** Therefore, it would have been obvious to

one skilled in the art at the time invention was made to use block polymer in an amount from 0.2 to 50 parts by weight; butadiene content in block polymer from 10 to 40 % by weight and the average molecular weight of block copolymer of not less than 40,000 to obtain the right balance between impact resistance and stiffness.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biletch et al (US 4, 772, 667) or Biletch et al (US 4, 680, 337) or Morita et al (US 6, 310, 148 B1) independently, in view of Toya et al (US 6, 107, 411) as applied to claim 13 above, and further in view of Kanno et al (US 6, 153, 698).

The discussion with respect to Biletch '667 or Biletch '337 or Morita et al independently in view of Toya et al in paragraph 11 is incorporated herein by reference.

The prior art is silent with respect to the use of this composition in blister packages.

However, Kanno et al teaches styrene based resin compositions which have acceptable molding properties and rigidity concomitant with high impact strength (column 1, lines 16-18). The styrene based monomers include styrene, methylstyrene, t-butyl styrene (column 5, lines 3-12). The styrene based monomers may be copolymerized with copolymerizable monomers such as methyl methacrylate, ethyl acrylate and butyl acrylate (column 5, lines 18-22). The rubbery polymers used may be styrene-butadiene copolymers, butadiene-isoprene copolymers (column 6, lines 24-27). The composition can be used for

variety of products having well balanced rigidity, impact resistance and surface appearance of molded articles such as blister packs (column 11, lines 7-11). Therefore, it would have been obvious to one skilled in the art at the time invention was made to use the composition of Biletch '667 or Biletch '337 or Morita et al independently in view of Toya et al in making blister packs because Kanno et al have proven successfully the utilization of similar composition in making blister packages and one of ordinary skill in the art would expect it to work for the composition of Biletch '667 or Biletch '337 or Morita et al independently in view of Toya et al, motivated by expectation of success.

Conclusion

The "X" references (US 4, 772, 667 and US 4, 680, 337 A) from the international search report has been considered and used in the rejection. The other "X" references have been considered but were not applicable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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